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United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, May 30, 2006
From: Kenneth Theisen, OSC

Subject: Final POLREP
OMC Plant No. 2
200 Seahorse Drive, Waukegan, IL
Latitude: 42.3689
Longitude: -87.8194

POLREP No.:	2	**Site #:**	0528
Reporting Period:	December 16, 2005 through May 19, 2006	**D.O. #:**	
Start Date:	12/14/2005	**Response Authority:**	CERCLA
Mob Date:		**Response Type:**	Time-Critical
Completion Date:	5/19/2006	**NPL Status:**	NPL
CERCLIS ID #:	ILD000802827	**Incident Category:**	Removal Action
RCRIS ID #:		**Contract #**	68-S5-05-07

Site Description

The OMC Site is located in the city of Waukegan, Lake County, Illinois. The site coordinates are Latitude 42°22'8.6" North and Longitude 87°49'10.1" West.

The OMC Plant 2 property consists of 65 acres, on which are located the approximately 1,000,000 square foot former manufacturing plant building and several parking lot areas to the south and north of the building. The Plant 2 Site is bordered by the North Ditch and North Shore Sanitary District to the north, the public beaches of Lake Michigan to the east, by Seahorse Drive and Larsen Marine to the south, and a railroad to the west.

On December 22, 2000, OMC filed for Chapter 11 federal bankruptcy protection and ceased all operations. Bombardier Motor Corporation, a Canadian company, bought OMC product lines and some assets in Plant 2 of February 5, 2001. Bombardier planned to sell, or move to a new facility in Wisconsin, many of the assets it bought. On August 9, 2002, the court entered an order converting the Debtor's case to a Chapter 7 case under the bankruptcy code. The court-appointed Trustee filed a petition to abandon the property on November 15, 2001

As a result of this pending abandonment and a Resource, Conservation and Recovery Act (RCRA) Preliminary Assessment/Visual Site Inspection (PA/VSI) done at the site in July 2001, in which many hazardous substances were found at the site, the Emergency Response Branch was asked to perform a comprehensive site investigation. This inspection would address all avenues of exposure to determine if an imminent and substantial endangerment to public health and/or the environment existed.

Plant 2 existed for over 50 years, during which it housed various aspects of the manufacture of marine engines. Throughout the 60's and into the 70's, the plant used hydraulic oil containing PCBs in its die casting operations. One of many locations where the oil was recovered from operations was the chip wringer area, where aluminum chips were removed from the oil. In addition, the plant used large amounts of trichloroethylene (TCE) as a degreaser, and a very large degreaser unit once operated at the site.

On March 4 through 6, 2002, the U.S. EPA and its contractor collected numerous samples from the ambient air, drums and tanks, monitoring wells, sediment from the North Ditch, soil, insulating materials, and surface area (wipe samples) in the plant. Results of the inspection showed the presence of hazardous materials and wastes, including radioactive materials, hydrofluoric acid, metallic mercury, flammable liquids, chlorinated solvents, PCBs (in two dozen large electrical transformers), and asbestos.

As a result of the analytical results of the samples described above that were written in the report entitled "Outboard Marine Corporation: Discovery Site Visit Report", U.S. Department of Justice (DOJ), U.S. EPA's Office of Regional Counsel, along with the State of Illinois Attorney General's Office and the OMC Trustee agreed on a settlement which required the Trustee to take certain actions before it could abandon the site. The required actions included removal of all drums, tanks, and containers, draining and flushing transformers, draining and disposal of all machines, removal of all batteries, and decontamination of all die cast and metal working machines.

Plant 2 was declared abandoned on December 10, 2002 by the Bankruptcy Court.

U.S. EPA conducted waste removal at Plant 2 over a nine week period beginning in May 2003. The completed removal activities included waste removal, floor decontamination, tunnel inspections, soil and groundwater sampling, asbestos removal, and transformer draining. Based on the analytical results from samples collected during the discovery site visit, it was determined that the majority of PCB contamination existed in the older portions of the plant (western portion). Tunnels in the old die cast area were inspected and videotaped to document potential contamination sources. No substantial contaminant releases to the environment were observed in the tunnels. Soil and groundwater were sampled during U.S. EPA removal activities to document releases of contaminants to the environment. Transformers were drained and left disconnected.

Air sampling was conducted to determine air quality inside the Plant 2 building and showed that PCB concentrations in air were still elevated. U.S. EPA removal activities are documented in the report entitled "EPA Removal Action Summary Report" dated December 12, 2003.

Upon abandonment of the Plant 2 property by the OMC Trust on December 10, 2002, U.S. EPA arranged for operation and maintenance of the sediment containment cell treatment system for a period of one year. As of December 10, 2003, arrangements with the City of Waukegan were required to continue these operations.

In 2004, the City of Waukegan contracted Deigan and Associates to perform an environmental site investigation of the easternmost portion of the OMC Plant #2, next to the Lake Michigan shoreline. The sampling area is approximately 13 acres located along the easternmost side of the OMC Plant #2 property. Deigan set up a grid pattern of surface and subsurface borings. Deigan collected soil, sediment, and groundwater samples in July 2004, October 2004, and May 2005. Nine sediment samples were collected from the North Ditch and five samples from the South Ditch. Soil PCB contamination was found in concentrations ranging from 1.2 to 14,000 milligrams per kilogram (mg/kg). PCB contamination was found in sediments at concentrations

ranging from 0.068 to 150 mg/kg. The highest soil concentrations were found in the northwest corner of the site near the North Ditch and the east sediment containment cell.

In response to the PCB contamination in the lakefront area, the U.S. EPA and its contractor conducted an environmental assessment to confirm the contamination and further define the extent of PCB contamination. The extent of contamination appeared to be defined along the site fence on the eastern edge of the Plant 2 property, between the east containment cell and the Lake Michigan shore, running south of the North Ditch about 400 feet. Several state-listed endangered plant species were identified by Deigan in the areas to be excavated. U.S. EPA solicited Illinois Department of Natural Resources (IDNR) for guidance on how to preserve state-endangered grass plants during excavation and followed IDNR's process for "endangered species consultation". U.S. EPA START contractor met with the local botanist who had inventoried the local plant species for the IDNR and City of Waukegan to delineate the locations of state-endangered grass plants. The local botanist and IDNR agents provided guidance and methods to protect endangered plants in the excavation areas.

Current Activities

Week ending December 16, 2005: U.S. EPA and its contractors mobilized to the site. Site activities included the delivery of two excavators and two off-road dump trucks to facilitate the excavation and movement of contaminated soil. Utilities were marked and a chain-link fence running through the proposed excavation area was removed. The excavation area was cleared and grubbed, and in another area, state-listed endangered grass plants were removed by hand, following IDNR's guidance. The grass plants were stored so that they would remain moist. Also, the top 6 inches of sand from the area where endangered grass plants were removed was scraped off and stockpiled nearby so it could be replaced after excavation activities were complete. This topsoil contained seeds and other organic material beneficial to grasses. Excavation of the area just south of the North Ditch began.

Week ending December 23, 2005: Site activities included continued excavation of the areas along the former fence line, stockpiling of contaminated soil, and backfilling excavations with clean sand. Trees, shrubs, and metal debris were placed in a roll-off box to be disposed of later. The excavation activities involved the use of two excavators digging in two nearby areas. The north excavation consisted of a rectangular area just south of the North Ditch that ran along the former fence line. The south excavation was a round area about 300 feet south of the North Ditch and about 150 feet in diameter. Both excavations were dug to depths of 8 feet below ground surface (bgs) in locations corresponding with previous samples exhibiting high PCB concentrations at depth. The remaining areas of the excavations were dug to a depth of four feet. Excavated soil was stockpiled on a former asphalt-paved parking lot located about 750 feet west of the excavation area.

The top two feet of soil in this area was obviously fill that contained dark-colored soil, wood, bricks, and concrete. Samples collected from the west wall of the north excavation (toward the east sediment containment cell wall) exhibited PCB concentrations of 138 and 744 ppm. No attempts were made to expand the excavation closer than eight feet to the east containment cell wall, to avoid potential damage to the containment cell wall. The north excavation was completely backfilled to original grade, and the south excavation was backfilled to within 3 feet of the original grade.

About 200 feet of South Ditch sediment was also excavated. An excavator removed sediment to a depth of two feet from a section of the South Ditch that corresponded with sample locations in which PCBs were observed at concentrations up to 150 ppm. The excavated sediment was

stockpiled with the excavated soil.

START personnel collected confirmation soil samples from excavation side walls and floors. Samples were also collected from excavated soil and backfill material.

Week ending January 6, 2006: Laboratory results from soil samples collected from the excavation east side walls indicated the presence of contaminated soil. An additional 6 feet of soil, to a 4-foot depth, was removed for a length of about 100 feet along the east wall of the north excavation. Backfill activities continued in the south excavation. Additional backfill material was trucked in and placed in the south excavation to bring it back to original grade. Following IDNR guidance, topsoil mix, consisting of 70% clean sand and 30% double-screened compost, was trucked in and spread to a depth of four to six inches over all of the north and half of the south excavation. The topsoil mix was suggested by IDNR and is similar to that used on a project at the nearby Illinois Beach State Park.

Laboratory analytical results of samples were collected from the contaminated soil stockpile and results are pending. The stockpile was consolidated and a berm of clean sand was placed around the stockpile to prevent runoff. Warning signs were placed on all sides of the stockpile. The parking lot pavement and the driveway between the stockpile location and the excavation sites were cleaned by a City of Waukegan street sweeper.

Topsoil saved at the beginning of excavation activities was replaced over half the south excavation and topsoil mix was spread over the remaining excavated areas. The topsoil was smoothed and contoured to match the original grade as closely as possible. The state-endangered grass plants were removed from storage and replanted in the eastern portion of the south excavation. The plants were mainly replanted in the area where original topsoil was spread, and the plants were spaced about six feet apart.

Heavy equipment (two excavators, two off-road dump trucks, and one end loader) was decontaminated at the conclusion of on site activities. Snow fencing was used to temporarily replace the section of chain-link fence removed before excavation commenced. U.S. EPA and its contractors demobilized from the site.

Week ending April 28, 2006: Composite sampling of stockpiled soils was conducted to characterize them for waste disposal. The soils were mixed using heavy equipment (two excavators and one end loader) prior to sampling to ensure they were homogeneous. The waste soils qualified as daily cover and were approved for disposal at the Onyx Zion Landfill in Zion, Illinois. The contaminated soils were loaded on trucks and transported to the Onyx Zion Landfill beginning on May 8, 2006. The loading and transportation was completed May 19, 2006. The excavators and loader were decontaminated and left on the site to be picked up by the rental company. Approximately 9,743 tons of contaminated soil was disposed of at the Onyx Zion Landfill.

The replanted endangered grass plants were observed to be viable, with at least 85 percent of the plants showing new, green growth.

Planned Removal Actions

All contaminated soil excavation and disposal activities associated with PCB contamination in the current phase are now complete.

Next Steps

Approximately 250 feet of 6-foot high chain link fence needs to be installed in the area where soil excavation took place.

Key Issues
None.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$476,350.00	$476,350.00	$0.00	0.00%
RST/START	$68,965.00	$68,965.00	$0.00	0.00%
Intramural Costs				
Total Site Costs	$545,315.00	$545,315.00	$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

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